Claims

1. - 10. (cancelled)

11. (Currently amended) A method for controlling functional units in a processor, the method comprising:

~~in~~ a configuration step, in which a sequence of primary instruction words consisting of multiple instruction word parts and originating from a translation of a program code is compressed and stored as a sequence of related program words, and according to which, in a subsequent execution step ~~phase~~, sequential secondary instruction words consisting of a plurality of instruction word parts and having the full instruction word width needed to control all functional units are generated from the sequence of program words, wherein ~~comprising: in result of~~ the configuration step is configured so that, a program word has a first characteristic of a primary instruction word from a first group of preceding primary instruction words, which has the greatest similarity to the primary instruction word associated with the program word, and contains instruction word parts that differentiate the primary instruction word belonging to the program word from the primary instruction word belonging to the first characteristic; and

in the subsequent execution step further: ~~phase~~,

obtaining a store of ~~storing each instruction word in~~ a second group (12) of secondary instruction words corresponding in number to the first group (11), wherein each secondary instruction word is provided with a second characteristic;

in accordance with the first characteristic contained in the program word, ascertaining that a particular secondary instruction word from the second group

correspond~~sing~~ to the associated primary instruction word ~~from the second group~~ via the associated second characteristic; and

generating ~~the~~ a specific secondary instruction word controlling functional units corresponding to the program word such that the instruction word parts contained in the program word are ~~exchanged in~~ combined ~~in~~ with the particular secondary instruction word from the second group.

12. (Currently amended) The method in accordance with claim 11, wherein:

the first group consists of a first number of primary instruction words that directly precede the primary instruction word belonging to the program word ~~in question~~; and

the second group consists of a second number of secondary instruction words that is at least equal to the first number, where, prior to the generation of the next sequential secondary instruction word, each most recent secondary instruction word is appended to the second group as the last word, and the first secondary instruction word to have been added and that is in excess of the second number is removed from the second group.

13. (Currently amended) The method in accordance with claim 11, further comprising replacing the particular secondary instruction word in the second group with ~~wherein~~ the newly generated specific secondary instruction word ~~is appended to the second group in that the former is stored in place of the secondary instruction word that was used for its generation~~.

14. (Currently amended) The method in accordance with claim 11, further comprising excluding ~~wherein~~ the newly generated specific secondary instruction word ~~is not stored~~ from the store of the second group of secondary instruction words.

15. (Currently amended) The method in accordance with claim 11, wherein the first characteristic is formed as a minimum code distance between the primary instruction word belonging to the program word in question and the primary instruction word with the greatest similarity.

16. (Currently amended) The method in accordance with 11, wherein the second characteristic ~~consists of~~ comprises an address corresponding to the first characteristic that is the address of a preceding secondary instruction word in a memory used for storage of the second group.

17. (Currently amended) The method in accordance with claim 11, wherein the program word consists of a number of instruction word parts that corresponds to the number of instruction word parts to be differentiated that occurs most frequently ~~within~~ in the configuration step, and ~~in that~~ and wherein a plurality of program words are used to assemble secondary instruction words that require more than the number of instruction words stored in one program word for the secondary instruction word used for generation.

18. (Currently amended) The method in accordance with claim 11, wherein the instruction word parts are compressed in one program word by reducing the bit width to the extent that it is possible to represent the most frequently occurring instruction word parts, and wherein ~~in that~~ multiple program words are used when instruction word parts occur that require a greater bit width in order to be represented.

19. (Currently amended) The method in accordance with claim 18, wherein the width of the instruction word parts in the program word is halved, and ~~one or~~ up to two program words are provided for representation of the instruction word parts.

20. (Currently amended) A processor arrangement for carrying out the method of claim 11, comprising:

a plurality of functional units;

an instruction word memory associated with the functional units; and

an instruction word buffer for storing instruction words that have already been generated and have a width that is at least the size of the bit width of the secondary instruction word; the instruction word buffer including a memory with selective line-by-line access.